Remarks/Arguments

This document includes an amendment to the specification and an amendment to the claims. Examiner's consideration is respectfully requested.

The specification has been amended to correct an error in paragraph [0014], where the terms "below Tg" and "above Tg" were mistakenly reversed.

Independent claim 1 has been amended to bring out more clearly the distinctive features of this invention, as explained below.

Response to 35 USC § 102 Rejection

Claims 1-4 were rejected under 35 U.S.C § 102 as anticipated by Van Andel, WO 2000/28807 A1. Applicants submit that the claims as amended overcome the examiner's rejection.

In order for the Van Andel reference to anticipate claims 1-4, it must disclose each and every element and limitation of the claims. The terminology in the preamble of Applicants' claim 1 must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.,* 868 F.2d 1251, 1257, 9USPQ2d 1962, 1966 (Fed. Cir. 1989). Claim 1 as amended is directed to a "portable container for potable water or water-based beverage", whereas the Van Andel's reference discloses a pervaporation device for the desalination of salt water. Such a device is not portable (it is intended for use primarily as irrigation mat) and does not contain potable water or water-based beverage (it contains saline water). Inasmuch as the Van Andel's reference does not disclose a portable container for potable water or water-based beverage, it is respectfully submitted that the reference does not disclose each and every element and limitation of the claims.

Furthermore, the Van Andel's pervaporation device could not perform the function of the claimed invention. The Van Andel's device is equipped with an upper sheet of sunlight absorbing black plastic or other heating system to raise the temperature of the saline water to 60-80 ºC. The cooling effect described in the whereby clause of Applicants' claim 1 could not possibly be realized.

It is therefore respectfully requested that the anticipation rejection of claims 1-4 be withdrawn.

Response to 35 USC § 103 Rejection

Claims 1-4 were rejected under 35 U.S.C § 103 as being unpatentable over Nomi (US 4,368,766) in view of Steenblock et al (US 5,703,161). Applicants respectfully request reconsideration of the rejection in view of the following remarks.

Even though the Nomi and Steenblock references are both concerned with permeable materials, they are directed to entirely different arts and in Applicants' opinion are not properly combinable. The Nomi reference is directed to a self-cooling water bag and as is therefore pertinent to Applicants' invention, but the Steenblock reference is directed to wind resistant textile composites, dressing materials and hygiene items (col 1, line 11-12), with no reference to any type of container or any type of cooling system. A closer connection between the two arts could be found if Nomi's polytetrafluoroethylene had the ability to transport water by the same solution/diffusion mechanism as the polyether block amide blend of Steenblock, as stated by the Examiner (p 4, line 23-25 of Office Action), but the Examiner is incorrect on this point. Nomi's polytetrafluoroethylene is highly hydrophobic and could not possibly transport water by a solution/diffusion mechanism.

Even if we accept the Examiner's position (p 6, lines 3-5 of Office Action) that both the Nomi and the Steenblock references are reasonably pertinent to the particular

problem with which Applicants are concerned, what is lacking is a motivation to combine the two. Examiner implies that the motivation to substitute Steenblock's polyether block amide blend membrane for Nomi's porous membrane stems from Steenblock's teachings of improved processability and improved imperviousness to bacteria and microbes of the polyether block amide membrane. Applicants respectfully submit that the teachings of Steenblock do not provide such a motivation, for the reasons explained below.

Regarding processability, Steenblock does not mention a processability advantantage of his polyether block amide blend over porous films, but he mentions instead a processability advantage over other types of polyether block amides. He states, for example, that the lamination of a polyether block amide described in EP-A-0 560 630 to improve tensile strength involves increased technical complexity (col 1, line 29-34). Again, on the subject of processability, Steenblock (col 1, line 67 to col 2, line 20) elaborates on the difficulty to achieve good processability with a polyether block amide while maintaining high water vapor permeability. He explains that good processability with a polyether block amide is typically achieved only at the expense of reduced water vapor transmission, and that even by mixing polyether block amides with different water absorption the processability problem is not corrected. Steenblock mentions microporous polytetrafluoroethylene only as an example of porous film (col 1, line 15-17), but there is no mention in his discussion of processing difficulties with this material. Microporous polytetrafluoroethylene is a highly successful product that has been available commercially for a long time under the trademark Goretex®. Applicants have not found mention of processability problems with this material in Steenblock, Nomi or other sources. On the contrary, the original patent on microporous polytetrafluoroethylene stresses the fact that the process is economical and commercially attractive (US 3,953,566, col 1, line 14-23).

Regarding bacteria imperviousness, Steenblock makes only a general statement concerning all types of water vapor permeable waterproof films. He states that a

water vapor permeable, waterproof film should satisfy a number of different requirements (col 1, line 44-45), and that for application in the medical field, imperviousness to bacteria and microbes is important (col 1, line 51-53). His statement regarding the importance of bacteria imperviousness in medical applications refers to all types of water vapor permeable waterproof films. He does not differentiate microporous from non-porous membranes in their ability to exclude bacteria. He does not state that non-porous membranes are superior to microporous membranes as bacteria barriers. If he did, he would be making an inaccurate generalization, because microporous membranes are actually very good barriers to bacteria, evidence the fact that microporous membranes are extensively used commercially for packaging sterile medical products, whereby the package allows admission of steam or ethyleneoxide gas for sterilization but blocks bacteria access and preserves sterility during storage. Bacteria cannot travel across the tortuous path of a microporous membrane. It is only when microporous membranes become wet that they lose their imperviousness to bacteria. For this reason, non-porous membranes are preferred in the medical field as dressings for wounds which may produce a liquid exudate or which may have to be kept wet. Although Steenblock does mention dressing materials as one of the possible applications of his polyether block amide blend membrane (col 1, line 12), he does not suggest the advantage of his membrane over microporous membranes for use as dressing on wounds, nor he suggests that such advantage stems from the ability of his membrane to exclude bacteria when wet, nor he suggests that the ability of his membrane to exclude bacteria when wet could be advantageously utilized in non-medical applications such as excluding bacteria from drinking water, nor he suggests that a cooling effect might be produced as a result of water transport through his membrane. Thus, there is no suggestion in the Steenblock reference that might lead the person skilled in the art of containers for drinking water to substitute Steenblock's polyether block amide blend for Nomi's microporous membrane. The desirability of the combination is not suggested. Such suggestion can only be derived from the hindsight knowledge of Applicants' own disclosure. The use of such hindsight knowledge to support an

obviousness rejection under 35 USC §103 is impermissible. See *W L Gore and Assocs, Inc, v Garlock, Inc, 721 F.2d 1553, 220 USPQ at 312-313.*

Applicants therefore submit that neither processability nor bacteria imperviousness provides the motivation to combine the Nomi and Steenblock references in the manner suggested by the Examiner.

As further evidence of nonobviousness of the claimed invention, Applicants would like to bring to the Examiner's attention the secondary considerations of the *Graham v John Deere* test, namely the long felt need and failure of others. As outlined in MPEP 716.04, the relevance of long felt need and failure of others to the issue of obviousness depends on three factors: first, the need must have been a persistent one that was recognized by those of ordinary skill in the art, second, the long felt need must not have been satisfied by another before the invention by applicant, and third, the invention must in fact satisfy the long-felt need.

With regard to the first factor, the need for a portable water container capable of maintaining drinking water cool while assuring that the water is not affected by contaminants including bacteria has long been recognized, as evidenced by several patents on this topic going back to 1945.

With regard to the second factor, the long felt need has not been previously satisfied by prior art water containers utilizing evaporative cooling. Wenzel, US 2,467,792, utilizes a macroporous container that allows exudation of liquid water and fails to provide protection from contaminants that adhere to the wet outside surface. Allenbach, US 2,865,420, attempts to solve the problem of contamination of the wet outside surface of a macroporous container by using a container design that is complex and impractical. Nomi, US 4,368,766, recognizes the problem of impurities collecting on the wet outside surface of macroporous containers (col 1, line 27-32) and discloses a microporous container that prevents adhesion of contaminants on

the outside surface (col 1, line 58-59). Nomi's container, however, does not prevent bacteria access. Nomi lists specific advantages of his container (col 1, line 38-60), but excluding bacteria is not one of them. As explained on page 7 of this response, microporous membranes are not impervious to bacteria when wet, which is the case when a microporous container is filled with water. Luetsch, US 5,983,662, avoids the bacteria contamination problem using a standard can, but evaporative cooling requires that a layer of sponge be placed around the container and be kept wet. This is not a passive cooling system because water must frequently be added to the sponge to maintain the cooling effect.

With regard to the third factor, Applicants' invention does in fact satisfy the long-felt need for a self-cooling container impervious to contaminants. The imperviousness to contaminants, including bacteria and microbes, is inherent in the continuous, monolithic, non-porous nature of the membrane.

Withdrawal of the obviousness rejection of claims 1-4 is therefore respectfully requested.

Conclusion

The claims of the present application as amended are believed by Applicants to be in condition for allowance and the Examiner's favorable consideration is respectfully requested. If the Examiner has any question that might easily be resolved by phone, he is invited to contact the Applicants at (847) 948-0392.

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Respectfully submitted,

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